

## WHAT IS CLAIMED IS:

1. An electrospray ionization source for use in connection with a mass spectrometer having an inlet port, including:
  - a nozzle holder;
  - a plurality of nozzles mounted to the holder at spaced-apart locations;
  - an actuator for driving the nozzle holder to sequentially position each of the nozzles in fluid transfer communication with an inlet port of a mass spectrometer while the plurality of nozzles are continuously spraying.
2. The electrospray ionization source of claim 1 wherein the actuator reciprocally drives the nozzle holder to sequentially position each of the nozzles in fluid transfer communication with an inlet port of a mass spectrometer.
3. The electrospray ionization source of claim 2 wherein the actuator reciprocally and rotationally drives the nozzle holder.
4. The electrospray ionization source of claim 3 and further including an actuator controller for controllably decelerating the nozzle holder when positioning the nozzles.
5. The electrospray ionization source of claim 4 wherein the actuator sequentially positions each of the nozzles at frequencies greater than 2 Hz.
6. The electrospray ionization source of claim 4 wherein the actuator sequentially positions each of the nozzles at frequencies greater than 4 Hz.
7. The electrospray ionization source of claim 4 wherein the actuator positions the nozzles in communication with an inlet port of a mass spectrometer for dwell times of at least 10 msec.

8. The electrospray ionization source of claim 1 and further including an adjustment mechanism for allowing positional adjustment of at least a first nozzle with respect to a second nozzle on the nozzle holder.

9. The electrospray ionization source of claim 1 wherein the actuator is a programmable motor.

10. The electrospray ionization source of claim 1 wherein the source is free of a shutter between the nozzles and an inlet port of a mass spectrometer.

11. The electrospray ionization source of claim 1 wherein the source has two nozzles mounted to the nozzle holder.

12. The electrospray ionization source of claim 1 wherein the nozzle holder is a polymer member.

13. A dual electrospray ionization source for use in connection with a mass spectrometer having an inlet port, including:

a polymer nozzle holder having a drive axis;

a pair of continuously spraying nozzles mounted to the nozzle holder at spaced-apart positions;

an adjustment mechanism for allowing positional adjustment of one nozzle with respect to the other nozzle on the nozzle holder; and

a programmable motor having a shaft connected to the nozzle holder at the drive axis, for rotationally and reciprocally driving the nozzle holder to sequentially position each of the nozzles in alignment with an inlet port of mass spectrometer.

14. The electrospray ionization source of claim 13 wherein the programmable motor drives the nozzle holder at frequencies greater than 2 Hz.

15. The electrospray ionization source of claim 13 wherein the programmable motor drives the nozzle holder at frequencies greater than 4 Hz.

16. The electrospray ionization source of claim 14 and further including an actuator controller for controllably decelerating the nozzle holder when positioning the nozzles.

17. The electrospray ionization source of claim 16 wherein the source is free of a shutter between the nozzles and an inlet port of a mass spectrometer.